Master of Cybersecurity

Distance Learning Masters Programme in Cybersecurity

INCREASING CYBERSECURITY KNOWLEDGE IN ASIAN COUNTRIES

Globalisation has driven a tremendous increase in the use of ICT, resulting in the growth of cyberterrorism and cybercrimes across the entire world. Protecting networks against these sophisticated criminal activities will become a significant responsibility for National Research and Education Networks (NRENs). It is therefore essential that NRENS build their capacity and skills in cybersecurity.

The University of Colombo School of Computing (UCSC) has become a centre of excellence for ICT in the Sri Lankan university system. UCSC's focus on high-quality excellence is underpinned by the skills and knowledge of its academic staff. It currently has three professors and 27 PhD qualified academics, who have graduated from leading universities in countries such as the UK, Canada, Australia, Japan, and Sweden, driving forward academic activities.

Asi@Connect provides dedicated high-capacity internet connectivity for research and education communities across Asia-Pacific; operating at speeds of up to 10 Gbps, it currently interconnects universities and research centres in 21 countries/economies across the region. It also connects to the 50 million European researchers and academics served by the GÉANT network and supports collaborative programmes in areas such as Earth observation, disaster warning, climate research, food security, delivery of e-health and e-learning.

Together, the UCSC and Asi@Connect offer a distance learning International Masters Programme in Cybersecurity(mc.ucsc.cmb.ac.lk). Supported by European Commission funding, this covers a broad spectrum of subjects around Network Security and Cybercrime Investigation. It offers postgraduate qualifications for NREN staff and members of universities in developing countries who are studying network security and digital forensics. The masters programme is primarily administered online through distance learning, with students required to be present at UCSC for hands-on practical sessions and end of semester examinations. The first students on the course are fifteen participants from NRENs in Afghanistan, Bangladesh, India, Myanmar, Nepal, Thailand and Sri Lanka.

Programme Objectives

1. Acquire a detailed understanding of cybersecurity challenges within networks.
2. Be able to Assess assess the cybersecurity risks faced by an organizationorganisation.
3. Learn to Design design and implement networked, software and distributed systems with cybersecurity in mind.
4. Gain expertise in both the theory and practice of cybersecurity.
5. Gain expertise to in manage managing the growing complexities complexity associated of with securing data and networks.
6. Gain a detailed understanding of the interdisciplinary aspects (technical, business, law, management, policy) of cybersecurity.

Semester-1	Semester-2	Semester-3	Semester-4
MC1001 : Principles of Cybersecurity	MC2001 : Database Security	MC3001 : Digital Forensics	MC4001 : Security Auditing and Risk Management
MC1002 : Cryptographic Systems	MC2002 : Malware and Software Vulnerability Analysis	MC3002 : Cybercrime and Legislation	MC4002 : Network Troubleshooting and Hardening
MC1003 : Network Protocol Standards			
MC2003 : Network Security	MC3003 : Data Mining and Open Source intelligence	MC4003 : Independent Studies in Cybersecurity	
MC1004 : Network Design and Performance			

Students need to be physically present four times at UCSC during the two year course to attend hands-on training and sit examinations at the end of each semester. New hardware and the latest software for the training laboratory will be installed by UCSC during the first phase of the programme. In addition, students will be exposed to real, ongoing cybercrime investigation activities in Sri Lanka.

All learning materials are published in a Learning Management System (LMS), which will be open to any interested communities. The programme will be reviewed every two years by using the input of trained graduates. In the future, students will be able to conduct the hands-on sessions and examinations in their countries, under UCSC supervision, meaning they will not need to travel to Sri Lanka. UCSC will maintain the LMS, conduct examinations and award the Masters of Cybersecurity postgraduate qualification to successful candidates on an ongoing basis.

More information can found at mc.ucsc.cmb.ac.lk. All learning materials will be available online at ucsc.moodlecloud.com after the initial programme is completed.

European Union

This activity has received funding from Asi@Connect project which is the European Union co-funding project under Grant contract ACA 2016-376-562.

Asi@Connect